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The Domino Game

This is the simulation of a standard domino game between the computer and a user player.

The game consists on placing the dominoes on a board. The goal is to be the first player to put his/her dominoes on the board.

The players:

This version of the game allows only 2 players: the computer, that is controlled by the software, and a human user player who makes his own decisions.

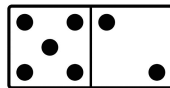
The only information requested about the user is the name.

The dominoes:

The domino set contains 28 dominoes.

Each domino possesses 2 sides: left and right.

Each side possess a fixed amount of “dots”. This amount is between 0 and 6.



This is the graphical representation of the domino (5,2) which has 5 “dots” on the left side and 2 “dots” on the right side.

The possible combination of dominoes are the following:

(6,6),(6,5),(6,4),(6,3),(6,2),(6,1),(6,0),

(5,5),(5,4),(5,3),(5,2),(5,1),(5,0),

(4,4),(4,3),(4,2),(4,1),(4,0),

(3,3),(3,2),(3,1),(3,0),

(2,2),(2,1),(2,0),

(1,1),(1,0),

(0,0)

Dominoes are considered as “double” if their left side is equal to the right side. Ex: (6,6).

The dominoes (X,Y) and (Y,X) are considered the same domino.

There is only one instance of each domino in the whole game. It can be either on the hand of the players, on the stock or on the board.

Two dominoes match if at least one of their side are equal. Ex:

A = (1,4)

B = (4,6)

C = (0,2)

We can say that A and B match and that C does not match A nor B.

The board:

At the beginning of the game the board is empty.

It is the space where the players put their dominoes.

The board is visible to all the players.

The board contains enough space to hold all the dominoes.

There exists only one board on the game.

Ex:

(1,3) (3,4) (4,4) (4,6) (6,2)

is a valid state of the board.

The board has 2 ends. The left end is the left side of the domino most to the left (1), and the right side is the right value of the domino most to the left (2).

Dominoes can only be placed on the ends of the table. A domino can only be placed next to another, if they match. This means that A and C can be placed on the table, but B can not.

The stock:

It holds all the dominoes before starting the game.

The dominoes on the stock are never visible to the players.

It contains all the dominoes that are not either on the board or on the players' hands. Its pieces can be drawn by the players if needed.

There exists only one stock on the game.

The hands:

Contains the dominoes that belong to the players.

The initial hand contains 7 dominoes randomly distributed.

The player can only play dominoes that are on his/her hand.

The hand of one player can not be seen by the other players.

The game:

Before starting the game, the user is asked to introduce his/her name, and the initial hand is given to each player.

Each player gets a turn to play 1 domino. Each turn takes as much time as the player desires.

The player who possesses the double six (6,6) starts the game. If no player has it. We look for the double five (5,5), then double (4,4), and so on. If no player possess any double, the user starts the game and may play any domino.

After the first domino is played, the players continue to place the dominoes on the board according to the turns.

If the player does not have any matching domino, he/she can draw 1 piece from the stock until he/she gets one domino that can play. If the stock is empty, the player "jump" and it is the other player's turn.

A player can not "jump" their turn if they have a matching domino to play.

The game ends when a player runs out of dominoes (win) or when none of the players can play a domino and the stock is empty (game blocked).